tions can mean that chemicals that pose a potentially serious problem i: some conditions may be used safely in other situations.

The variability in hydrogeology and soil conditions in Florida has re suited in significant regional differences in ground water contaminatioi from aldicarb. In the northwest potato-growing area in Florida, very littl aldicarb has been detected despite shallow ground water and a long histor of aldicarb use. However, subsurface drainage to surface water in this are; does contain substantial aldicarb concentrations. It is believed that the hy drogeology and alkaline conditions in this region cause rapid degradation o aldicarb. In contrast, in the central citrus-growing region aldicarb has beei detected in a number of areas. In the central region, very sandy soils, acidi soil conditions, low soil organic content, and shallow water tables promot aldicarb's persistence and its ability to reach ground water (Holden, 1985).

In order to examine the interaction between environmental fate charac teristics of pesticides and soil conditions, mathematical models have bee] developed that attempt to predict the movement of a pesticide as a functioi of its chemical characteristics and usage patterns and as a function of loca soil and climatic conditions (Carsel et al., 1985; Jury et al., 1983). CDF; plans to use such models to identify which pesticides should be prohibited ii which areas within the state.

Registration of Pesticides and Data Gaps

To be sold as a pesticide, a material must be granted a "registration" b; the EPA. Most states also have their own state boards that review the dat; and decide whether to grant a registration for the state. Local officials ma; also have authority to prevent registration in a certain area because the] believe that the material poses a threat to ground water. Aldicarb, for exam pie, is registered for use in New York and California, but is prohibited fron use in one county in California and on Long Island.

The Environmental Protection Agency requires data to be submitted b] the manufacturer to determine if the pesticide meets health and safety stan dards. Federal law prohibits EPA from registering a pesticide unless thi applicant submits data to prove the product will not cause "unreasonabL adverse effects on man and the environment." (Reference U.S. Code, Sec tion 136a(c)(5)(D).) Unfortunately, the "adverse effects" standard was no enforced until 1972. Because of slow progress in reviewing and updating th< registrations of older pesticides, many maintain federal registration withou meeting existing data requirements or satisfying the toxicological and envi ronmental standards that newer products must meet in order to gain regis trations.

The Federal Environmental Pesticides Control Act of 1972 (an amend